PUBLIC NOTICE
Alaska Department of Environmental Conservation (DEC)
Wastewater Discharge Authorization Program/§401 Certification
555 Cordova Street, Anchorage AK9501-2617
Phone: 907-269-6285 | Email: DEC-401Cert@alaska.gov

Notice of Application for State Water Quality Certification

Public Notice (PN) Date: September 21, 2022
PN Expiration Date: October 11, 2022
PN Reference Number: POA-2003-00502-M20 v1.0
Waterway: Cook Inlet - Knik Arm

Any applicant for a federal license or permit to conduct an activity that might result in a discharge into navigable waters, in accordance with Section 401 of the Clean Water Act (CWA) of 1977 (PL95-217), also must apply for and obtain certification from the Alaska Department of Environmental Conservation that the discharge will comply with the CWA, the Alaska Water Quality Standards, and other applicable State laws.

Notice is hereby given that a request for a CWA §401 Water Quality Certification of a Department of the Army Permit application, Corps of Engineers’ PN Reference Number indicated above has been received for the discharge of dredged and/or fill materials into waters of the United States (WOUS), including wetlands, as described below, and shown on the project figures/drawings. The public notice and related project figures/drawings are accessible from the DEC website at http://dec.alaska.gov/water/wastewater/.

To comment on the project or request for a public hearing with respect to water quality, submit comments electronically via the DEC public notice site at https://water.alaskadec.commentinput.com/?id=gFVba on or before the public notice expiration date listed above.

 Applicant: Municipality of Anchorage, Steve Ribuffo, 2000 Anchorage Port Road Anchorage, AK 99501; (907) 343-6201; steve.ribuffo@anchorageak.gov.

 Agent: HDR Inc., Mike Holley, 582 E 36th Ave Anchorage, AK 99503; (907) 885-5798; Michiel.Holley@hdrinc.com.

 Project Name: Knik Arm Port of Alaska North Extension Stabilization (NES) project “Step 1”

 Location: The proposed activity is located within Section 7, T. 13 N, R. 3 W; Seward Meridian; in Anchorage, Alaska. Project Site Latitude 61.233499° N., Longitude -149.985068° W.; With potential discharge location(s) as follows: NES Step 1 - excavated material -149.91600, 61.23500; NES Step 1 - armor rock retaining wall -149.88305, 61.24694.

 Purpose: The applicant states the purpose is to create a new shoreline that is structurally and seismically stable and useable for port activities, while maximizing the retention of salvageable lands that were created under the Port Intermodal Expansion Project (PIEP) and supporting the improvement of hydrodynamic conditions of the USACE Anchorage Harbor project. The Municipality of Anchorage (MOA) and the Port have identified NES as a priority for the PAMP, due to the impact of the existing structure’s geometry upon the USACE Anchorage Harbor project, mariners concern regarding impacts to safe ship-berthing operations, and engineering concerns regarding structural and geotechnical stability of the system. Accordingly, a significant portion of the NES work has been designated for inclusion in Phase 2 PAMP efforts, specifically those portions of the existing works that are closest to Terminal 3. The purpose of the NES project is to create a safe and stable area that will support Port operations while also addressing concerns of adverse impacts upon the Federal Navigation Channel and Dredging Program.
**Project Description:** The NES project will result in a reconfiguration and realignment of the shoreline within the North Extension (area north of the existing general cargo Terminal 3). The NES project will be completed in two distinct steps, NES-Step 1 and NES-Step 2, separated by multiple years. Construction of NES-1 will include completion of the following tasks:

- Use of deep soil mixing (DSM) techniques to replace existing fill material with cementitious materials and placement of armor rock along the new face of the shoreline.
- Removal of approximately 1.33 million cubic yards of material down to -39 feet mean lower low water (MLLW).
- Offshore disposal of approximately 1.2 million cubic yards of removed material; and
- Removal of the existing unstable PIEP sheet pile wall (Z piles, bulkhead, and tailwalls).

The location of the new shoreline will align approximately with the shoreline that existed after the first stage of the PIEP. Alignment of the NES project (NES-Step 1 and NES-Step 2) can be seen in the preliminary design drawings of NES-Step 1. In this project, the Port is attempting to maximize the retention of salvageable lands that were created under the PIEP while supporting the improvement of hydrodynamic conditions of the USACE Anchorage Harbor project. NES-Step 1 will remove approximately half of the PIEP structure extending approximately 900 feet north from the southern end of the North Extension and stabilize the remaining portion of the North Extension. The construction of NES-Step 1 is anticipated to be performed in two stages, as described below:

**NES-Step 1, Stage 1** – The first stage of construction will include installation of soil improvement using DSM as a ground improvement technique along the proposed realignment of the shoreline to provide geotechnical stability to the embankment. In this design, the DSM is used to protect against slope failure and reduce soil deformation in a modeled seismic event, improving structural and geotechnical stability of the system. DSM will create improved performance by strengthening zones of the soil mass that will be “keyed-into” the underlying materials. The design requires the replacement of in situ materials with a cemented volume at a replacement ratio of 33-percent across a 2,500-square foot cross section representing approximately 44,306- cubic yards of cementitious materials along an approximate 1,450-ft long alignment. This work will be constructed “in the dry” from the surface of the existing North Extension fill. The excavated material will be stockpiled on the remaining portions of NES, referred to as the NES Step2 area. Some of the excavated material may have beneficial use and could be used as fill for maintenance activities at the Port. The remaining material that is deemed unsuitable will be stockpiled at the NES-Step 2 area for future disposal.

**NES-Step 1, Stage 2** – The second stage of construction will form the end-state embankment with a top elevation of 38.0-ft MLLW, sloping to a toe elevation of approximately -40.0-ft MLLW. This will be accomplished through the removal of the PIEP sheet pile bulkhead through incrementally shearing and removing the sheet pile material and the impounded soils (PIEP fill material). Approximately 1,333,000 cubic yards are planned to be removed as part of NES-Step 1. The soils will be removed as required to form the foreshore slope through excavation and stockpile of suitable materials above the waterline. Dredging and sea disposal is planned for those materials below the waterline. The lower portion of the embankment slope from -40.0-ft MLLW to approximately -8.0-ft MLLW on the northern portion of the project and approximately -14.0 feet MLLW on the southern portion will be at 6H:1V (6 feet horizontal to 1 foot vertical) and unarmored. A grade-break will occur above these elevations as the slope will transition to a 2H:1V slope armored with approximately 69,000 tons of primary armor stone (median sized at 4,600-pounds), filter rock, and granular fill. Estimated quantities placed below the high tide line are 38,000 cubic yards of armor rock, 19,000 cubic yards of filter rock and 12,500 cubic yards of granular fill. Estimated quantities placed below mean high water are 33,000 cubic yards of armor rock, 16,500 cubic yards of filter rock and 11,000 cubic yards of granular fill. Depending upon the tidal regime under which the work is performed, the excavated material may be approximately 20 feet thick. The Port may use portions of these materials to support other infill/back stabilization efforts for additional PAMP projects or other beneficial uses for those saline-laden materials deemed suitable for reuse outside of the Port property.
Excavated materials that are below the tide line are potentially in a quick state (saturated) and will likely be removed by land- and sea-based excavation operations to form a maximum slope of 6H:1V, with the goal of minimizing spillage into Cook Inlet. Removal operations may include the use of a clam-shell excavator, dragline excavator, Sauerman excavator, and/or suction dredge, depending upon the contractor’s work plan. There are three types of material estimated to be salvaged from NES-Step 1: 1,500 cubic yards of armor rock, 9,100 cubic yards of riprap, and 80,000 cubic yards of material meeting specifications for Type II Classified Fill. These materials will be stockpiled in two possible locations, shown on Figure 4 in the design drawings. The salvaged Type II Classified Fill will be used to bring the grade of the area landward of the new rock retaining wall to a final elevation of +38 feet MLLW. Remaining soil will be disposed of at the Anchorage Harbor Open Water Disposal Site. This material will be tested, as necessary, to verify suitability for offshore disposal. It is anticipated that contractor supplied work barges will be used to support the operation. The existing PIEP sheet pile bulkhead will become unstable as impounded soil material is removed. Accordingly, it is anticipated that the contractor would work from the southernmost cell in a northward direction, using a combination of land- and sea-side mechanical excavation. Tail and face walls of the PIEP sheet pile bulkhead structure would be removed to the depth required by USACE to support dredging limits established for the Federal Dredging Project, specified at -46 MLLW in the 2017 Section 408 approval from USACE. A work barge will likely be utilized to haul the removed sheet piles off site.

Effort will be made to remove as much material impounded by the PIEP sheet piles as practicable; however, some spill of materials into Cook Inlet is expected during removal of the PIEP sheet piles. General conditions of the construction contract will specify that the contractor will minimize the release of materials into Cook Inlet and that the contractor will expeditiously remove spilled materials by dredging to minimize impacts to the USACE Anchorage Harbor project.

Upon completion, the Project will create a new shoreline that is structurally and seismically stable and balances the preservation of uplands created in the PIEP while addressing the formation of unwanted sedimentation within the USACE Anchorage Harbor project and improving vessel maneuver safety at the northern berths. While it is possible that the type and design of the new embankment may change based on further engineering, the alignment of the bulkhead and general project configuration is not anticipated to change.

After reviewing the application, the Department may certify there is reasonable assurance the activity, and any discharge that might result, will comply with the CWA, the Alaska Water Quality Standards, and other applicable State laws. The Department also may deny or waive certification.

The permit application and associated documents are available for review. For inquiries or to request copies of the documents, contact dec-401cert@alaska.gov, or call 907-269-6285.

**Disability Reasonable Accommodation Notice**

The State of Alaska, Department of Environmental Conservation complies with Title II of the Americans with Disabilities Act (ADA) of 1990. If you are a person with a disability who may need special accommodation in order to participate in this public process, please contact ADA Coordinator Jason Burnett at 907-269-3056 or TDD Relay Service 1-800-770-8973 / TTY or dial 711 prior to the expiration date of this public notice to ensure that any necessary accommodations can be provided.
APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 1 of 21: Project Location
APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 2 of 21, Site Vicinity

PROJECT LOCATION
Gulf of Alaska
KOTZEBUE
KODIAK
JUNEAU
ANCHORAGE
FAIRBANKS
PRUDHOE BAY

NES1 Sloped Grade  
NES1 Surface Boundary  
NES1 Stabilization Structure

South Floating Dock

KNIK ARM
PORT OF ALASKA

Project Coordinates: 61.246, -149.884
APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 3 of 21, NES1 Action Area
PORT OF ALASKA

Cairn Point
Port MacKenzie
Point

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 4 of 21, Beluga Whale Critical Habitat Areas

APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 4 of 21, Beluga Whale Critical Habitat Areas

**Beluga Critical Habitat Area**

**Beluga Critical Habitat Area 1**

**Beluga Critical Habitat Area 2**
Offshore Disposal
Site Coordinates:
61.240, -149.913

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022

APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 5 of 21, Dredging and Disposal Area
APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 7 of 21, NES1 Location & Project Features (Aerial Imagery)
Segment Cross Section Example of Disposal Site

Example Cross Section (feet)

Depth (ft MLLW)

0 100 200 300 400 500 600 700 800 900 1000

+0.0 MLLW
Theoretical Dumping Mounds
NES1
Dredging Area
Sloped Grade
Vessel Movement Corridor
Anchorage Dredged Material Disposal Area
Beluga Critical Habitat

0 250 500 Meters
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 11 of 21: Permit Drawing Location Map
### Standard Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPR</td>
<td>Approached</td>
</tr>
<tr>
<td>BOT</td>
<td>Bottom</td>
</tr>
<tr>
<td>CB</td>
<td>Catch Basin</td>
</tr>
<tr>
<td>CMP</td>
<td>Corrugated Metal Pipe</td>
</tr>
<tr>
<td>CORR</td>
<td>Corrugated Polyethylene Pipe</td>
</tr>
<tr>
<td>CONT</td>
<td>Continuous</td>
</tr>
<tr>
<td>CNT</td>
<td>Cutoff</td>
</tr>
<tr>
<td>EX</td>
<td>Existing</td>
</tr>
<tr>
<td>EL</td>
<td>Elevation</td>
</tr>
<tr>
<td>ELE</td>
<td>Elevation</td>
</tr>
<tr>
<td>FT</td>
<td>Foot</td>
</tr>
<tr>
<td>H</td>
<td>Horizontal</td>
</tr>
<tr>
<td>HT</td>
<td>Horizontal</td>
</tr>
<tr>
<td>HTN</td>
<td>High Tide Line</td>
</tr>
<tr>
<td>MAX</td>
<td>Maximum</td>
</tr>
<tr>
<td>MIN</td>
<td>Minimum</td>
</tr>
<tr>
<td>NH</td>
<td>High Water</td>
</tr>
<tr>
<td>NHI</td>
<td>Mean High Water</td>
</tr>
<tr>
<td>NLW</td>
<td>Mean Lower Low Water</td>
</tr>
<tr>
<td>NLR</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>NES</td>
<td>Northern Extension Stabilization</td>
</tr>
<tr>
<td>HN</td>
<td>HN Scale</td>
</tr>
<tr>
<td>N</td>
<td>New</td>
</tr>
<tr>
<td>NTH</td>
<td>North</td>
</tr>
<tr>
<td>PC</td>
<td>Point of Curvature</td>
</tr>
<tr>
<td>PI</td>
<td>Point of Intersection</td>
</tr>
<tr>
<td>PT</td>
<td>Point of Tangency</td>
</tr>
<tr>
<td>R.IOW</td>
<td>Radius of Way</td>
</tr>
<tr>
<td>SD</td>
<td>South</td>
</tr>
<tr>
<td>SDMH</td>
<td>South Backlands Stabilization</td>
</tr>
<tr>
<td>SWPP</td>
<td>Storm Drain</td>
</tr>
<tr>
<td>TYP</td>
<td>Storm Drain Manhole</td>
</tr>
<tr>
<td>USAGE</td>
<td>Storm Water Pollution Prevention Plan</td>
</tr>
<tr>
<td>VERT</td>
<td>Typical</td>
</tr>
<tr>
<td>W</td>
<td>United States Army Corps of Engineers Vertical</td>
</tr>
<tr>
<td>WEST</td>
<td>Vertical</td>
</tr>
</tbody>
</table>

### General Notes

1. **In General:** Existing structures and facilities are noted as "Existing" and are shown in light line weights, dashed line type, or faded screened background. Proposed or to be constructed features are shown in heavy line weights.

2. The primary horizontal coordinate system is Alaska State Plane Zone 4.

3. The vertical datum for the project is Mean Lower Low Water (MLLW = 0.0'), based on the NOAA tidal benchmark #9455920 located at the Port of Anchorage. Vertical control is provided in the survey control drawings.

4. Upland topography (above 0.0' MLLW and outside project limits): Summer 2015 aerial LiDAR and terrestrial topographic surveys.

5. Bathymetric contours (below 0.0' MLLW) and outside the project boundaries: September 2014 USACE survey.

6. The contractor shall have an approved SWPPP plan in place prior to commencement of construction activities.

7. The contractor shall complete bathymetric and terrestrial survey prior to construction to confirm quantities. Survey data shall be provided to the owner's representative 7 days prior to construction.

8. Riprap design parameters:
   - Wave height = 6.6 feet with a period of 5.7 seconds, based on wind speed of 29.3 MPH from the southwest.
   - Ice thickness = 3 feet

9. Applicable design standards and codes:
   - Municipality of Anchorage Standard Specifications (M.A.S.S.)
   - Municipality of Anchorage Drainage Design Guidelines
   - State of Alaska - Alaska Pollutant Discharge Elimination System (APDES) Program
   - Port of Anchorage - Municipal Separate Storm Sewer System (MS4) Permit

### Index of Drawings

<table>
<thead>
<tr>
<th>Sheet Number</th>
<th>Drawing Number</th>
<th>Drawing Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NES-1-0020</td>
<td>Vicinity Map and Location Map</td>
</tr>
<tr>
<td>2</td>
<td>NES-1-0020</td>
<td>Abbreviations, General Notes, and Index of Drawings</td>
</tr>
<tr>
<td>3</td>
<td>NES-1-0020</td>
<td>Access Route and Actor Staging Area</td>
</tr>
<tr>
<td>4</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>5</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>6</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>7</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>8</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>9</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>10</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>11</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>12</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>13</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>14</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>15</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>16</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>17</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>18</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>19</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>20</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
<tr>
<td>21</td>
<td>NES-1-0020</td>
<td>Existing Images</td>
</tr>
</tbody>
</table>

### Utilities Legend

- **Storm Drain Manhole**
- **Culvert Pipe**
- **Underground Electric Line**
- **Storm Drain/Line**

### General Civil Notes

1. Many of the symbols on this legend are used only where they provide clarity and are not necessarily used at all applications. Some drawings in the contract documents have additional legends applicable to those specific drawings.
APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 13 of 21: Project Limits, Contractor Staging Areas, & Road Access Routes

SHEET KEYNOTES
1. The Port of Alaska is a restricted facility and security clearance is required for project access. Port access may be limited or restricted at any time. Coordinate and comply with contractor access and security protocols throughout construction.
2. Municipal and state load restrictions apply. All loads are to be secured to prevent debris from scattering on roadways.
3. Manage fugitive dust from earth moving operations according to the project storm water pollution prevention plan (SWPPP).
4. Area shown is approximate. Limited contractor staging will be available within the project limits. Coordinate final staging area layout with the owner's representative prior to mobilization. Do not stage equipment or materials outside of the designated staging area limits. Limited contractor staging will be available within the project limits. Coordinate final staging area layout with the owner's representative prior to mobilization. Do not stage equipment or materials outside of the designated staging area limits.
5. Maintain access to the dry barge berthing throughout the project duration. Coordinate access impacts with the owner's representative in advance of disruption.
6. Contractor shall coordinate with roadway contractors for access to the project site.

PROJECT LIMITS & STAGING AREA LIMITS

<table>
<thead>
<tr>
<th>MARK</th>
<th>NORTHING</th>
<th>EASTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2,646,661.99</td>
<td>1,660,876.69</td>
</tr>
<tr>
<td>B</td>
<td>2,647,067.76</td>
<td>1,661,041.36</td>
</tr>
<tr>
<td>C</td>
<td>2,646,906.72</td>
<td>1,661,438.16</td>
</tr>
<tr>
<td>D</td>
<td>2,647,091.05</td>
<td>1,661,446.36</td>
</tr>
<tr>
<td>E</td>
<td>2,647,367.94</td>
<td>1,661,309.52</td>
</tr>
<tr>
<td>F</td>
<td>2,647,907.31</td>
<td>1,661,406.84</td>
</tr>
<tr>
<td>G</td>
<td>2,648,027.42</td>
<td>1,661,523.02</td>
</tr>
<tr>
<td>H</td>
<td>2,648,138.95</td>
<td>1,661,543.09</td>
</tr>
<tr>
<td>I</td>
<td>2,648,367.50</td>
<td>1,661,565.94</td>
</tr>
<tr>
<td>J</td>
<td>2,649,195.45</td>
<td>1,661,601.73</td>
</tr>
<tr>
<td>K</td>
<td>2,649,178.68</td>
<td>1,661,300.47</td>
</tr>
<tr>
<td>L</td>
<td>2,648,275.86</td>
<td>1,661,172.45</td>
</tr>
<tr>
<td>M</td>
<td>2,648,423.69</td>
<td>1,660,772.20</td>
</tr>
<tr>
<td>N</td>
<td>2,647,334.30</td>
<td>1,660,374.45</td>
</tr>
<tr>
<td>O</td>
<td>2,646,768.93</td>
<td>1,660,619.18</td>
</tr>
</tbody>
</table>

Alaska DEC Watermark
APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022

FIGURE 14 of 21: Existing Images

WATERSIDE VIEW OF THE NORTH EXTENSION OCSP CONTAINMENT WITH ORIGINAL DESIGN BASAL DEPTH

SUBSIDENCE OF IMPOUNDED MATERIALS AT THE FACE WALL OF OCSP CELL 66 ILLUSTRATING MATERIAL LOSSES THROUGH THE FACE SHEET INTERLOKS (ICRC 2010)

OPEN CELL SHEET PILE OCSP SYSTEM MECHANICS (PND, PILE DRIVER MAGAZINE, 2012)
GENERAL NOTES:
1. THE REQUESTED CHANGES TO THE CURRENT ANCHORAGE HARBOR MAINTENANCE DREDGE LIMITS PROVIDED HEREIN ARE SPECIFIC TO ANCHORAGE PORT MODERNIZATION PROGRAM (APMP) PHASE 1 ONLY.
2. THE PROPOSED DREDGING BOUNDARIES SHOWN ON THIS PLAN ARE SUBJECT TO CHANGES AFTER THE USACE SEDIMENTATION ANALYSIS IS COMPLETED AND THE PROPOSED BOUNDARIES ARE EVALUATED BY USACE HYDROLOGISTS HAVING EXPERTISE WITH THE ANCHORAGE HARBOR FEDERAL DREDGING PROJECT.
3. ZONE 1 DREDGE AREA IS DEFINED AS 800' FROM FACE OF EXISTING TERMINALS AND FROM NEW NES STEP 1 TOE OF SLOPE. ZONE 1 AREA IS DEFINED AS ALL DREDGE AREAS OUTSIDE OF ZONE 1.
4. THE 50 FOOT DREDGING SAFETY OFFSET ALONG THE PERIMETER OF THE NORTH EXTENSION MUST REMAIN IN PLACE UNTIL THE STABILIZATION WORK IS COMPLETED.

PROPOSED ADDITION TO AREA A:
ZONE 1 DREDGING LIMITS

PROPOSED ADDITION TO AREA B:
ZONE 2 DREDGING LIMITS

ANCHORAGE HARBOR DISPOSAL SITE
CORNER # NORTHING EASTING
DS-1 2648121.87 1657928.58
DS-2 2648805.49 1656049.56
DS-3 2642354.11 1653700.90
DS-4 2641670.05 1655579.94

PROPOSED ADDITION TO AREA B:
ZONE 2 DREDGING LIMITS

APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 15 of 21: Dredging Plan NES Step 1
APPLICANT: Municipality of Anchorage,
Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 16 of 21: Survey Control
APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program, Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022

FIGURE 17 of 21: Existing Conditions & Demolition Plan

GENERAL NOTES
1. DISPOSAL OF SHEET PILES, DREDGED MATERIAL, NON-STOCKPILED MATERIAL, CONCRETE, ASPHALT, AND OTHER CONSTRUCTION DEBRIS IS THE RESPONSIBILITY OF THE CONTRACTOR. DREDGED MATERIAL MUST BE DUMPED INTO THE DREDGE PRISM OR WITHIN 25'-30' OF THE DREDGE PREAM OR IT CANNOT BE REMOVED.
3. PROTECT LIGHT POLES (2) DURING SOIL IMPROVEMENTS.
4. PAVEMENT CUT LINE.
5. REMOVE AND REPLACE ELECTRICAL LINE OUTSIDE OF SOIL IMPROVEMENTS.
6. CUT & REMOVE ASPHALT PAVEMENT, 20' WIDE TYP.
7. STORM DRAIN SYSTEM TO BE RELOCATED OUTSIDE OF DSM AREA. TO BE COMPLETED BY OTHERS. CONTRACTORS SHALL COORDINATE AS NECESSARY.

LEGEND

SHEET PILE WALL REMOVAL

ASPHALT PAVEMENT

TERMINAL 3

EXISTING USACE DREDGE BOUNDARY

TOP OF EXISTING EMBANKMENT

SOIL IMPROVEMENT AREA, SEE TYPICAL SECTIONS

LIMITS OF MATERIAL REMOVAL

REMOVE EMBANK

REMOVE RIPRAP

REMOVE RIPRAP SLOPE

REMOVE Z PILES

REMOVE SHEET PILE BULKHEAD & FAUX

SCALE IN FEET

0 100 200

N

Alaska DEC Watermark
APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 18 of 21: General Site Plan

DREDGING LIMITS (APPROXIMATE 4' GROUND CONTOUR)
FINISHED GRACE
CONTOUR, TYP
DREDGING AREA
SOIL IMPROVEMENT AREA, SEE TYPICAL SECTIONS
(N) EDGE OF UPLANDS
PH 05-17
PH 04-17
(N) BARRIERS ALONG TOP OF SLOPE
(STA 10+00 TO 25+70), SEE B/C3012
PH 03-17
PH 02-17
PH 01-17
PH 06-17
PH 07-17
PH 08-17
PH 09-17
(N) BARRIERS ALONG TOP OF SLOPE
(STA 10+00 TO 25+70), SEE B/C3012
PH 05-17
PH 04-17
(N) BARRIERS ALONG TOP OF SLOPE
(STA 10+00 TO 25+70), SEE B/C3012
PH 03-17
PH 02-17
PH 01-17
PH 06-17
PH 07-17
PH 08-17
PH 09-17

REMOVE UNDERGROUND ELECTRICAL LINE PRIOR TO SOIL IMPROVEMENTS AND RE-INSTALL PRIOR TO PAVING

REMOVE PAVEMENT FOR SOIL IMPROVEMENTS AND REPLACE PRIOR TO COMPLETION

(N) BARRIERS ALONG TOP OF SLOPE
(STA 10+00 TO 25+70), SEE B/C3012

SOIL IMPROVEMENT AREA, SEE TYPICAL SECTIONS

ALIGNMENT CONTROL
STATION NORTHING EASTING
BP 10+00.00 2,646,681.98 1,660,855.68
PI 14+10.38 2,647,061.85 1,661,010.83
PI 24+58.78 2,648,110.04 1,660,996.60
PC 25+84.48 2,648,130.98 1,660,872.68
PT 26+15.17 2,648,154.23 1,660,859.15
EP 26+58.22 2,648,194.67 1,660,873.91

SBS-G-2009
NES-C-3011

SCALE IN FEET

FINISHED GRADE
CONTOUR, TYP

Alaska DEC Watermark
APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 19 of 21: Typical Sections
APPLICANT: Municipality of Anchorage, Port of Alaska Modernization Program
Northern Extension Stabilization, Step 1
FILE NO: POA-2003-00502-M20

WATERWAY: Knik Arm
LOCATION: Section 7, Township 13N, Range 3W, Seward Meridian
DATE: June, 2022
FIGURE 21 of 21: Typical Sections

GENERAL NOTES
1. ESTIMATED QUANTITIES BELOW MHW:
   ARMOR ROCK = 33,000 CY
   FILTER ROCK = 16,500 CY
   GRANULAR FILL = 11,000 CY

2. ESTIMATED QUANTITIES BELOW HTL:
   ARMOR ROCK = 38,000 CY
   FILTER ROCK = 19,000 CY
   GRANULAR FILL = 12,500 CY

3. ESTIMATED EARTHWORK QUANTITIES FOR ENTIRE NES,
   STEP 1:
   EXCAVATION (ASSUMED BELOW MLLW) = 600,000 CY
   DREDGING (ASSUMED BELOW MLLW) = 700,000 CY
   ESTIMATED USEABLE MATERIAL = 100,000 CY

1.2.3.

FINISH GRADE 38'
MLLW
MHW (28.4')
HTL (34.7')

EXISTING GROUND

ARMOR ROCK DETAIL

SOIL IMPROVEMENTS

 PRIMARY ARMOR ROCK

6:1

D

NES-C-0013

FILTER ROCK

GRANULAR FILL 2' MIN

MLLW

VARES

HTL (34.7')

MHW (28.4')

ALIGNMENT

FINISH GRADE 38'

Alaska DEC Watermark